

SECTION 2

BASIC NUTRITION AND MYPYRAMID



TABLE OF CONTENTS

2.0 Basic Nutrition

2.0.1 Introduction

2.0.2 Purpose

2.0.3 Objectives

2.1 Dietary Reference Intakes

2.2 Food Groups

2.3 The Dietary Guidelines for Americans

2.3.1 Key Recommendations for the General Population

2.4 The Framework for Educating Consumers on MyPyramid

2.4.1 Discretionary Calorie Allowance

2.5 Self-Test Questions

2.0 BASIC NUTRITION

2.0.1 Introduction

Food is an enjoyable part of our everyday lives. Often lost in the big picture, however, is the importance our food choices are for our overall health. Food has a more important role in our lives, as food, in the right amounts at the right times is what helps to keep our bodies working properly. Food helps us breathe, move and think. Food keeps us alive and well. This module covers the basic concepts of good nutrition. By understanding these concepts, you'll become a more effective educator.

The 2005 Dietary Guidelines for Americans are the basis for federal nutrition policy. The MyPyramid Food Guidance System provides food-based guidance to help implement the recommendations of the Guidelines. MyPyramid was based on both the Guidelines and the Dietary Reference Intakes (DRIs) from the National Academy of Sciences, while taking into account the current consumption patterns of Americans. MyPyramid translates the Guidelines into a total diet that meets nutrient needs from food sources and aims to moderate or limit dietary components often eaten in excess. An important tool is the Nutrition Facts label on food products.

MyPyramid provides Web-based interactive and print materials for consumers.

2.0.2 Purpose

The purpose of Section 2 is to describe MyPyramid Food Guidance System and the framework for providing basic nutrition education.

2.0.3 Objectives

Upon completion of Section 2, you will be able to:

1. Describe the purpose of the Dietary Guidelines for Americans and MyPyramid.
2. Identify the MyPyramid food groups and name foods found within each group.
3. Describe what a healthy diet consists of according to the Dietary Guidelines for Americans.
4. Identify key topic areas for which the Dietary Guidelines for Americans make recommendations.
5. Understand the basic rationale for recommendations made in the Dietary Guidelines for Americans.
6. Identify strategies to assist participants in meeting the Dietary Guidelines for Americans.
7. Provide nutrition education about planning a healthy diet according to MyPyramid.

2.1 **DIETARY REFERENCE INTAKES**

The Food and Nutrition Board of the Institute of Medicine, National Academies of Sciences, have released the DRIs periodically for selected nutrients. The DRIs replace and expand the Recommended Dietary Allowances (RDA). The DRIs are values that are quantitative estimates of nutrient intakes to be used for planning and assessing diets for healthy people. The DRIs include levels that may reduce the risk of cardiovascular disease, osteoporosis, certain cancers and other diseases that are diet-related. This framework that emerged has replaced the RDAs with a set of four dietary references: the EAR, RDA, AI and UL.

- **Estimated Average Requirement (EAR):** the average daily nutrient intake level estimated to meet the requirement of half of the healthy individuals in a particular life stage and gender group; used to assess the adequacy of diets of groups of people.
- **Recommended Dietary Allowance (RDA):** the average daily nutrient intake level sufficient to meet the nutrient requirement of nearly all (97 to 98 percent) healthy individuals in a particular life stage and gender group.
- **Adequate Intake (AI):** a recommended average daily nutrient intake level based on observed or experimentally determined approximations or estimates of nutrient intake by a group (or groups) of apparently healthy people that are assumed to be adequate—used when an RDA cannot be determined.
- **Tolerable Upper Intake Level (UL):** the highest average daily nutrient intake level likely to pose no risk of adverse health effects to almost all individuals in the general population. As intake increased above the UL, the potential risk of adverse effects increases.

Because the RDAs are developed for groups rather than individuals, the RDAs should be used primarily to plan and evaluate the diets of groups of people. Because the human body stores nutrients for later use, we do not need to eat the RDA for each nutrient every day. Separate recommendations are made for different sets of people: men, women, pregnant women, and children. The RDAs do not apply to infants.

How are DRI values applied? Most applications fall into one of four categories: assessment, planning, educational and regulatory. These four categories are not mutually exclusive. For example, educational goals are related inherently to assessment and planning.

2.2 **FOOD GROUPS**

The foods we eat are categorized into groups of similar components and nutrients. The food groups include: grains; vegetables; fruits; milk, yogurt and cheese; meat and beans; and oils.



GRAIN GROUP

Foods in the grain group include any food made from wheat, rice, oats, cornmeal, barley or another cereal grain. Bread, pasta, oatmeal, breakfast cereals, tortillas and grits are examples of grain products.

Grains are divided into two subgroups, whole grains and refined grains.

- Whole grains contain the entire grain kernel—the bran, germ and endosperm.
 - Examples include: whole wheat flour; bulgur (cracked wheat); oatmeal; whole cornmeal; brown rice.
- Refined grains have been milled, a process that removes the bran and germ. This is done to give grains finer texture and improve their shelf life, but it also removes the dietary fiber, iron, and many B vitamins.
 - Examples include: white flour; degermed cornmeal; white bread; white rice.
 - Most refined grains are enriched. This means certain B vitamins (thiamin riboflavin, niacin folic acid) and iron are added back after processing. Fiber is not added back to enriched grains.

VEGETABLE GROUP

The vegetable group includes any vegetable or 100% vegetable juice.

Vegetables may be raw or cooked; fresh; frozen; canned; or dried/dehydrated; and may be whole, cut-up or mashed. Vegetables are organized into 5 subgroups, based on their nutrient content. The subgroups and some commonly eaten vegetables in each group are:



Dark Green Vegetables: bok choy, broccoli, collard and turnip greens, spinach.

- **Orange Vegetables:** acorn squash, carrots, sweet potatoes, pumpkin.
- **Dry Beans and Peas:** black beans, kidney beans, lentils, soy beans, tofu, lima beans.
- **Starchy Vegetables:** corn, green peas, lima beans, potatoes.
- **Other Vegetables:** asparagus, beets, celery, cauliflower, cucumbers, tomatoes, zucchini.

FRUIT GROUP

The fruit group includes any fruit or 100% fruit juice. Fruits may be fresh or cooked, canned, frozen or dried/dehydrated and may be whole, cut-up or pureed.

MILK, YOGURT AND CHEESE GROUP

All fluid milk products and many foods made from milk are considered part of this group. This includes milk-based desserts like ice cream and pudding and soft cheeses such as ricotta and cottage cheese. Foods made from milk that retain their calcium content are part of this group, while foods made from milk that have little to no calcium, such as cream cheese, cream and butter are not in this group. Most milk group choices should be fat-free or low-fat.

For those who are lactose intolerant, lactose-free and lower-lactose products are available. These include hard cheeses and yogurt. Also, enzyme preparations can be added to milk to lower the lactose content. Calcium-fortified foods and beverages, such as soy beverages or orange juice may provide calcium, but may not provide the other nutrients found in milk and milk products.

MEAT, POULTRY, FISH, DRY BEANS, EGGS AND NUTS (MEAT & BEANS) GROUP

The meat and beans group includes all foods made from meat, poultry, fish, dry beans or peas, eggs, seeds and nuts. Dry beans and peas are a part of this group as well as the vegetable group. Most meat and poultry choices should be lean or low-fat. Fish, nuts and seeds contain healthy oils and can be chosen instead of meat or poultry.

OILS

Oils are fats that are liquid at room temperature, like the vegetable oils used in cooking. Oils come from many different plants and from fish.

Some common oils are:



- Canola oil
- Cottonseed oil
- Soybean oil
- Corn oil
- Safflower oil
- Olive oil

Some oils are used mainly as flavorings, such as walnut oil and sesame oil. A number of foods are naturally high in oils, like nuts, olives, some fish and avocados.

Foods that are mainly oil include mayonnaise, certain salad dressings and soft margarine with no *trans* fats. Most oils are high in monounsaturated or polyunsaturated fats and low in saturated fats. Oils from plant sources (vegetable and nut oils) do not contain any cholesterol. A few plant oils however, including coconut oil and palm kernel oil, are high in saturated fats and for nutritional purposes be considered to be solid fats.

Solid fats are fats that are solid at room temperature, like butter and shortening. Solid fats come from many animal foods and can be made from vegetable oils through a process called hydrogenation. Some common solid fats are butter, beef fat (tallow, suet), chicken fat, stick margarine and shortening.

2.3 THE DIETARY GUIDELINES FOR AMERICANS

The Dietary Guidelines for Americans, 2005, gives science-based advice on food and physical activity choices for health. The recommendations in the Dietary Guidelines and in MyPyramid are for the general public over 2 years of age.

What is a "healthy diet"? The Dietary Guidelines describe a healthy diet as one that:

- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- Includes lean meats, poultry, fish, beans, eggs, and nuts; and
- Is low in saturated fats, *trans* fats, cholesterol, salt (sodium), and added sugars.

2.3.1 Key Recommendations for the General Population

ADEQUATE NUTRIENTS WITHIN CALORIE NEEDS

- Consume a variety of nutrient-dense foods and beverages within and among the basic food groups while choosing foods that limit the intake of saturated and *trans* fats, cholesterol, added sugars, salt and alcohol.
- Meet recommended intakes within energy needs by adopting a balanced eating pattern, such as the U.S. Department of Agriculture (USDA) Food Guide or the Dietary Approaches to Stop Hypertension (DASH) Eating Plan.

WEIGHT MANAGEMENT

- To maintain body weight in a healthy range, balance calories from foods and beverages.
- To prevent gradual weight gain over time, make small decreases in food and beverage calories and increase physical activity.

PHYSICAL ACTIVITY

- Engage in regular physical activity and reduce sedentary activities to promote health, psychological well-being and a healthy body weight.
 - To reduce the risk of chronic disease in adulthood: Engage in at least 30 minutes of moderate-intensity physical activity, above usual activity, at work or home on most days of the week.
 - To help manage body weight and prevent gradual, unhealthy body weight gain in adulthood: Engage in approximately 60 minutes of moderate- to vigorous-intensity activity on most days of the week while not exceeding caloric intake requirements.
 - To sustain weight loss in adulthood: Participate in at least 60 to 90 minutes of daily moderate-intensity physical activity while not exceeding caloric intake requirements. Some people may need to consult with a healthcare provider before participating in this level of activity.
 - For most people, greater health benefits can be obtained by engaging in physical activity of more vigorous intensity or longer duration.
- Achieve physical fitness by including cardiovascular conditioning, stretching exercises for flexibility, and resistance exercises or calisthenics for muscle strength and endurance.

FOOD GROUPS TO ENCOURAGE

- Consume a sufficient amount of fruits and vegetables while staying within energy needs. Two cups of fruit and 2½ cups of vegetables per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts recommended depending on the calorie level.
- Choose a variety of fruits and vegetables each day. In particular, select from all five vegetable subgroups (dark green, orange, legumes, starchy vegetables, and other vegetables) several times a week.
- Consume 3 or more ounce-equivalents of whole-grain products per day, with the rest of the recommended grains coming from enriched or whole-grain products. In general, at least half the grains should come from whole grains.
- Consume 3 cups per day of fat-free or low-fat milk or equivalent milk products.

FATS

- Consume less than 10 percent of calories from saturated fatty acids and less than 300 mg/day of cholesterol, and keep *trans* fatty acid consumption as low as possible.
- Keep total fat intake between 20 to 35 percent of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils.
- When selecting and preparing meat, poultry, dry beans, and milk or milk products, make choices that are lean, low-fat, or fat-free.
- Limit intake of fats and oils high in saturated and/or *trans* fatty acids, and choose products low in such fats and oils.

CARBOHYDRATES

- Choose fiber-rich fruits, vegetables and whole grains often.
- Choose and prepare foods and beverages with little added sugars or caloric sweeteners, such as amounts suggested by the USDA Food Guide and the DASH Eating Plan.
- Reduce the incidence of dental caries by practicing good oral hygiene and consuming sugar and starch containing foods and beverages less frequently.

SODIUM AND POTASSIUM

- Consume less than 2,300 mg (approximately 1 teaspoon of salt) of sodium per day.
- Choose and prepare foods with little salt. At the same time, consume potassium-rich foods such as fruits and vegetables.

ALCOHOLIC BEVERAGES

- Those who choose to drink alcoholic beverages should do so sensibly and in moderation—defined as the consumption of up to one drink per day for women and up to two drinks per day for men.
- Alcoholic beverages should not be consumed by some individuals, including those who cannot restrict their alcohol intake, women of

- childbearing age who may become pregnant, pregnant and lactating women, children and adolescents, individuals taking medications that can interact with alcohol and those with specific medical conditions.
- Alcoholic beverages should be avoided by individuals engaging in activities that require attention, skill, or coordination, such as driving or operating machinery.

FOOD SAFETY

- To avoid microbial foodborne illness:
 - Clean hands, food contact surfaces, and fruits and vegetables. Meat and poultry should not be washed or rinsed.
 - Separate raw, cooked, and ready-to-eat foods while shopping, preparing, or storing foods.
 - Cook foods to a safe temperature to kill microorganisms.
 - Chill (refrigerate) perishable food promptly and defrost foods properly.
 - Avoid raw (unpasteurized) milk or any products made from unpasteurized milk, raw or partially cooked eggs or foods containing raw eggs, raw or undercooked meat and poultry, unpasteurized juices, and raw sprouts.

Note: *The Dietary Guidelines for Americans 2005 contains additional recommendations for specific populations. The full document is available at www.healthierus.gov/dietaryguidelines.*

2.4 THE FRAMEWORK FOR EDUCATING CONSUMERS ON MYPYRAMID

The Education Framework provides specific recommendations for making food choices that will improve the quality of an average American diet. These recommendations are interrelated and should be used together. MyPyramid is not a therapeutic diet for any specific health condition. Individuals with a chronic health condition should consult with a health care provider to determine what dietary pattern is appropriate for them.

Taken together they would result in the following changes from a typical diet:

- Increased intake of vitamins, minerals, dietary fiber and other essential nutrients, especially those that are often low in typical diets.
- Lowered intake of saturated fats, *trans* fats and cholesterol and increased intake of fruits, vegetables and whole grains to decrease risk for some chronic diseases.
- Calorie intake balanced with energy needs to prevent weight gain and/or promote a healthy weight.

The overarching themes for educating on MyPyramid include:

- Variety—Eat foods from all food groups and subgroups.
- Proportionality—Eat more of some foods (fruits, vegetables, whole grains, fat free or low-fat milk products), and less of others (foods high in saturated or *trans* fats, added sugars, cholesterol, salt and alcohol).
- Moderation—Choose forms of foods that limit intake of saturated or *trans* fats, added sugars, cholesterol, salt and alcohol.

- Activity—Be physically active every day.

MYPYRAMID KEY CONCEPTS FOR EDUCATORS

The table below includes key concepts covered by MyPyramid that are important to convey to consumers. These are not intended to be messages for consumers, but rather provide a framework for developing educational messages.

Topic	What	Why	How
Calories	<p>Balance calorie intake from foods and beverages with calories expended.</p> <p>Limit the amount of fats, added sugars and alcohol consumed to stay within the discretionary calorie allowance.</p>	To maintain body weight in a healthy range	<p>Determine the number of calories needed for energy balance. These can be estimated from the 2005 Dietary Guidelines, Table 3.</p> <p>Strategies:</p> <p>Choose versions of foods that are “nutrient dense”</p> <p>Limit the amounts of added sugars, fats and oils (especially solid fats) and alcohol consumed to keep discretionary calorie intake within the allowance for a selected food intake pattern.</p> <p>Substitute plain water or other calorie free beverages for beverages high in added sugars (such as regular sodas).</p> <p>Increase physical activity level.</p> <p>If too many calories are consumed one day, consume less the next day.</p>
	If weight loss is needed, aim for a slow steady weight loss by decreasing calorie intake while maintaining an adequate nutrient	To lose weight	Following the food intake pattern at a calorie level identified for the person’s age and sex may result in weight loss. Food intake

Topic	What	Why	How
	intake and increasing physical activity.		<p>patterns are based on energy needs of a person with a healthy weight. Thus, people who are overweight may be able to lose weight following the food intake pattern for their age and sex.</p> <p>Increasing physical activity level may also assist with weight loss.</p> <p>Those with a chronic disease or are on medication should consult with a health care provider about weight loss strategies to ensure proper management of other health conditions.</p>
Physical Activity Adults	<p>Engage in regular physical activity and reduce sedentary activities.</p> <ul style="list-style-type: none"> ▪ To reduce the risk of chronic disease, engage in at least 30 minutes of moderate- to vigorous-intensity physical activity above usual activity at work or home on most days of the week. ▪ To manage body weight and prevent gradual, unhealthy weight gain, engage in up to 60 minutes of moderate- to vigorous-intensity physical activity on most days of the week while not exceeding caloric intake requirements. ▪ To sustain weight loss engage in at least 60 to 90 minutes of daily 	<p>To increase total energy needs, which makes it easier to meet nutrient requirements</p> <p>To help reduce the risk of chronic disease, as part of an overall healthy diet, to help prevent weight gain, and/or to sustain weight loss</p> <p>To improve physical fitness</p>	<p>Physical activity recommendations are above usual activity. Physical activity may include short bouts (≥10 minutes) to accumulate total time over the day.</p> <p>Moderate activity is when a person feels some exertion but should be able to carry on a conversation.</p> <p>Vigorous activity results in a significant increase in heart and breathing rate.</p> <p>Strategies:</p> <p>Build more physical activity into daily routine at home and work such as walking and biking rather than driving.</p>

Topic	What	Why	How
	moderate-intensity physical activity while not exceeding caloric intake requirements.		Choose leisure time activities that provide moderate to vigorous activity, such as outdoor walks or hikes, participating in sports, or playing actively with children. Plan a time for exercise in daily routine.
Physical Activity—Children	Engage in at least 60 minutes of physical activity on most, preferable all days of the week.	Same as above	
Grains	<p>Make at least half of the total grains eaten whole grains.</p> <p>Since the recommended 3 ounce equivalents may be difficult for young children to achieve, they should gradually increase the amount of whole grains in their diets.</p>	<p>To help reduce the risk of coronary heart disease and other chronic diseases, as part of an overall healthy diet</p> <p>To provide dietary fiber</p> <p>To maintain adequate laxation</p>	<p>Examples of whole grains include brown rice, oatmeal and whole wheat pasta, bread, crackers and tortillas.</p> <p>Strategies:</p> <p>Check the ingredient list on grain product labels. The words “whole” or “whole grain” will appear before the grain ingredient’s name.</p> <p>Check the Nutrition Facts label for the fiber content of the food product. Fiber is a good clue to the amount of whole grain in the product.</p> <p>Choose 100% whole grain breads or mixed whole and white flour breads.</p> <p>Substitute whole grain choices for various types of refined grains, such as breakfast cereals, breads and crackers.</p>

Topic	What	Why	How
			Add whole grains to mixed dishes such as soups, stews and casseroles.
	Keep the total amount of grains eaten to the amount needed each day.	To maintain caloric balance	Check portion sizes of the grain foods frequently consumed.
Vegetables	Eat recommended amounts of vegetables and choose a variety of vegetables each day.	<p>To provide a variety of nutrients and dietary fiber in the diet</p> <p>To help reduce the risk of chronic diseases, as part of an overall healthy diet.</p>	<p>Fresh, frozen and canned vegetables all count towards meeting vegetable intake goals. For canned vegetables, no-salt added are the best choice.</p> <p>Strategies:</p> <p>Include vegetables in at least lunch, dinner and snacks.</p> <p>Prepare main dishes, side dishes and salads that include vegetables.</p> <p>Add vegetables to mixed dishes such as soups, stews, casseroles and stir-fries.</p>
	<p>Eat more dark-green and orange vegetables and dry beans and peas.</p> <p>See MyPyramid for specific recommendations for dark-green and orange vegetables.</p>	To provide a variety of nutrients and fiber in the diet	<p>Dark-green vegetables include broccoli, kale, spinach and watercress.</p> <p>Orange vegetables include carrots, sweet potatoes, pumpkin and winter squash.</p> <p>Beans and peas include kidney beans, pinto beans, split peas, chickpeas and lentils.</p> <p>Strategies:</p> <p>Add dark-green or orange vegetables to soups, stews, casseroles and</p>

Topic	What	Why	How
			<p>stir-fries.</p> <p>Use dark leafy greens as salad greens and eat green salads often.</p> <p>Choose main dishes, side dishes and salads that include dry beans or peas.</p>
	Keep the amount of starchy vegetables to the amount needed each week.	<p>To maintain caloric balance</p> <p>To provide a variety of nutrients and fiber in the diet</p>	<p>Starchy vegetables include white potatoes, corn and green peas.</p> <p>Strategies:</p> <p>Select a small sized portion, such as a small baked potato or small order of French fries.</p> <p>Choose other types of vegetables in place of starchy vegetables.</p>
	Choose a variety of vegetables regularly.	To provide a variety of nutrients and fiber in the diet	<p>Examples include tomatoes, green beans, celery, cabbage, onion and mushrooms.</p> <p>Strategies:</p> <p>Include a variety of vegetables in meals regularly.</p>
Fruits	Eat recommended amounts of fruit and choose a variety of fruits each day.	<p>To provide a variety of nutrients and fiber in the diet</p> <p>To help reduce the risk of chronic diseases, as part of an overall healthy diet</p>	<p>Fresh, canned, frozen and dried fruits all count towards meeting fruit goals.</p> <p>Strategies:</p> <p>Use fruit in salads, toppings, desserts and/or snacks regularly.</p> <p>Select fruits in season to increase variety.</p> <p>Choose fruits canned only in juice or water.</p>

Topic	What	Why	How
	Keep the amount of fruit juice consumed to less than half of total fruit intake.	To provide adequate fiber in the diet	<p>Strategies:</p> <p>Choose whole or cut-up fruits more often as snacks or with meals, instead of juice.</p> <p>Consider water as a beverage choice.</p>
Milk, Yogurt and Cheese	<p>Consume 3 cups of fat-free or low-fat (1%) milk or an equivalent amount of yogurt or cheese per day.</p> <p>Children 2 to 8 years old— Consume 2 cups of fat-free or low-fat milk, or an equivalent amount of yogurt or cheese per day.</p> <p>Consume other calcium rich foods if milk and milk products are not consumed.</p>	<p>To provide the nutrients needed for bone health</p> <p>To provide a variety of nutrients in the diet while keeping saturated fat and cholesterol intake low</p>	<p>Equivalent amounts for one cup of milk are 1 cup of yogurt, 1½ ounces natural cheese such as cheddar, parmesan, brie, mozzarella and Swiss cheeses, or 2 ounces of processed cheese.</p> <p>Lactose free milk or drinking smaller amounts of milk at a time are options for those that are lactose intolerant.</p> <p>Other sources of calcium include calcium-fortified beverages, fortified breakfast cereals, sardines, or tofu made with calcium. The bioavailability of these calcium sources may vary.</p> <p>The Nutrition Facts label provides information on the calcium content of food products.</p> <p>Strategies:</p> <p>Drink fat-free or low-fat milk as a beverage.</p> <p>Use fat-free or low-fat milk or yogurt on cereal.</p> <p>Eat fat-free or low-fat yogurt as a snack</p>

Topic	What	Why	How
			Choose low-fat cheeses.
Meat, Poultry, Fish, Dry Beans, Eggs and Nuts	Make choices that are low-fat or lean when selecting meats and poultry.	To provide a variety of nutrients in the diet while keeping saturated fat and cholesterol intake low	<p>Lean meats, poultry, fish, eggs, dry beans and peas, nuts and seeds all count toward meeting meat and bean group goals.</p> <p>Strategies:</p> <p>Select meat cuts that are low in fat and ground beef that is extra lean (at least 90% lean).</p> <p>Trim fat from meat and remove poultry skin before cooking or eating. Drain fat from ground meats after cooking.</p> <p>Use preparation methods that do not add fat, such as grilling, broiling, poaching or roasting.</p> <p>Choose lean luncheon meats for sandwiches.</p>
	<p>Choose a variety of different types of foods from this group each week. Include lean meats, poultry, fish, eggs, dry beans and peas, nuts and seeds.</p> <p>Consider dry beans and peas as an alternative to meat or poultry as well as a vegetable choice.</p>	To provide a variety of nutrients in the diet including essential fatty acids and vitamin E	<p>Fish rich in omega-3 fatty acids include salmon, trout and herring.</p> <p>Strategies:</p> <p>Select fish as a choice from this group more often, especially fish rich in omega-3 fatty acids.</p> <p>Choose beans or peas as a main dish often.</p> <p>Choose nuts as a snack, add to salads or use in main dishes to replace meat or poultry, not in addition to these.</p>

Topic	What	Why	How
Fats and Oils	<p>Choose most fats from sources of monounsaturated and polyunsaturated fatty acids, such as fish, nuts, seeds and vegetable oils.</p> <p>Keep the amount of oils consumed within the total allowed for caloric needs.</p> <p>Some foods are naturally high in oils such as nuts, olives, avocados and some fish.</p>	<p>To provide essential fatty acids and vitamin E</p> <p>To maintain caloric balance—fats and oils are high in calories</p>	<p>Examples of oils include canola, olive, peanut, soybean, corn, safflower, and sunflower oil.</p> <p>Strategies:</p> <p>Substitute vegetable oils for solid fats like butter, stick margarine shortening or lard.</p> <p>Substitute nuts for meat or cheese served as a snack or as part of a meal.</p> <p>Choose fish rich in omega-3 fats, such as salmon, trout and herring and walnuts. Soy, flax and walnuts are also good sources of omega-3 fatty acids.</p>
	<p>Choose grain products and prepared foods that are low in saturated and trans fat.</p>	<p>To keep saturated fat, trans fat, and cholesterol intake low to reduce risk for heart disease as part of an overall healthy diet</p> <p>To maintain caloric balance—fats and oils are high in calories</p>	<p>Strategies:</p> <p>Limit products containing saturated fats, such as ground and processed meats, full-fat cheese, cream, ice cream and fried foods.</p> <p>Limit foods containing partially hydrogenated vegetable oils, which contain <i>trans</i> fats, such as some commercially fried foods and some bakery goods.</p> <p>Select baked, steamed or broiled rather than fried foods most often.</p> <p>Select lean or low-fat</p>

Topic	What	Why	How
			foods most often. Prepared foods that have a higher fat content, such as cookies and some crackers should be included in the discretionary calorie budget.
Sugars and Sweets	<p>Choose and prepare foods and beverages with little added sugars or caloric sweeteners.</p> <p>Keep the amount of sugars and sweets consumed within the discretionary calorie allowance, after taking into account other discretionary calories that have been consumed.</p>	<p>To maintain caloric balance while providing sufficient nutrients</p> <p>Sugars have calories but are low in nutritional value</p>	<p>Added sugars include high fructose corn syrup, other syrups, sucrose, glucose, fructose, lactose, maltose, brown sugar, honey, molasses, fruit juice concentrates and raw sugar added to food products.</p> <p>Strategies:</p> <p>Choose water, fat-free milk or unsweetened tea or coffee as a beverage most often.</p> <p>Limit sweet snacks and desserts.</p> <p>Select unsweetened cereals.</p> <p>Choose canned fruits in 100% fruit juice or water rather than in syrup.</p>
	Practice good oral hygiene and consume sugar- and starch containing foods and beverages less frequently.	To reduce the incidence of dental caries	<p>Strategies:</p> <p>Brush teeth and floss regularly.</p> <p>Drink fluoridated water.</p> <p>Eat sugar and starch-containing foods less frequently.</p>
Salt	<p>Choose and prepare foods with little salt.</p> <p>Keep sodium intake less than 2300 mg per day.</p> <p>One teaspoon (5 milliliters)</p>	To reduce risk for hypertension, as part of an overall healthy diet	<p>The Nutrition Facts label provides information on sodium content of foods.</p> <p>Processed meats and</p>

Topic	What	Why	How
	of table salt has 2,325 mg of sodium.		<p>fresh chicken, turkey and pork that have been enhanced with a salt-containing solution also have added sodium.</p> <p>Some food product labels say “no salt added” or “low sodium.” Foods with less than 140 mg per serving can be labeled as low sodium foods.</p> <p>Strategies:</p> <p>Use the Nutrition Facts label to choose foods with less sodium. Some products that may vary widely in sodium content include frozen dinners, packaged mixes, cereals, cheese, breads, soups, salad dressings and sauces.</p> <p>Prepare more foods from fresh ingredients—most of the sodium, in the food supply comes from packaged foods.</p>
Alcohol	<p>If one chooses to drink alcohol, consume it in moderation. Some people in certain situations should not drink.</p> <p>Keep consumption of alcoholic beverages within daily discretionary calorie allowance.</p>	<p>To avoid the potential harmful health effects of more than moderate drinking</p> <p>To maintain caloric balance—alcoholic beverages have calories but are low in nutritional value</p>	<p>Moderate drinking means no more than 1 drink per day for women and 2 drinks per day for men. Twelve ounces of regular beer, 5 ounces of wine and 1½ ounces of 80-proof distilled spirits count as a drink.</p> <p>Alcoholic beverages contain calories. There are about 100 calories in 12 ounces of light beer, 5 ounces of wine and 1½ ounces of 80-proof</p>

Topic	What	Why	How
			distilled spirits. Higher alcohol content or mixing alcohol with regular soft drinks, tonic water, fruit juice or cream increases the calories in the beverage.
Food Safety	<p>Clean hands, contact surfaces and fruits and vegetables. To prevent cross-contamination, meat and poultry should not be washed or rinsed.</p> <p>Separate raw, cooked and ready to eat foods while shopping, preparing or storing foods.</p> <p>Cook foods to a safe temperature to kill microorganisms.</p> <p>Chill (refrigerate) perishable foods promptly and defrost foods properly.</p> <p>Avoid raw (unpasteurized) milk or any products made from unpasteurized milk, raw or partially cooked eggs, or foods containing raw eggs, raw or undercooked meats and poultry unpasteurized juices and raw sprouts.</p>	<p>To avoid microbial foodborne illness</p> <p>For more information visit www.fightbac.com</p>	<p>Strategies:</p> <p>Wash hands in hot soapy water before preparing food and after using the bathroom, changing diapers and handling pets. Wash cutting boards, knives, utensils and counter tops with hot soapy water after preparing each food item and before going on to the next one. Under clean, running water, scrub fresh produce briskly with hands or a brush to remove dirt and surface microorganisms, and dry after washing.</p> <p>Separate raw meat, poultry and seafood from other food in the grocery-shopping cart. Store raw meat, poultry and seafood on the bottom shelf of the refrigerator so juices don't drip onto other foods. Do not wash meat or poultry to avoid cross contamination.</p> <p>Use a meat thermometer to measure the internal temperature of cooked meat and poultry to make sure that the meat is</p>

Topic	What	Why	How
			<p>cooked all the way through.</p> <p>Refrigerate or freeze perishables, prepared food and leftovers within 2 hours. Thaw food in the refrigerator, in an air-tight package under cold running water or in the microwave.</p>

2.4.1 Discretionary Calorie Allowance

Each person needs a certain amount of calories to keep their body functioning and to provide energy for physical activity. This calorie budget can be divided into “essentials” and “extras.” Essential calories are the minimum calories required to meet nutrient needs. Extra calories can be used on luxury foods, like solid fats (i.e. adding butter or margarine to foods), added sugars and alcohol, or on more food from any of the food groups. These “extras” are the balance of calories remaining in a person’s estimated energy allowance, or EER after accounting for the number of calories needed to meet recommended nutrient intakes through consumption of foods in low-fat or no added sugar forms. The discretionary calorie allowance may be used in selecting foods that are not in their most nutrient dense form (e.g. whole milk rather than fat-free milk) or may be additions to foods (e.g. salad dressing or butter). Most discretionary calorie allowances are very small between 100 and 300 calories, especially for those who are not physically active. For many people the discretionary calorie allowance is totally used by the foods they choose to eat in each food group such as higher fat meats, cheeses, milk or sweetened bakery products.

The discretionary calorie allowance can be used to:

- Eat more foods from any food group than the food guide recommends.
- Select forms of foods that contain solid fats or added sugars.
- Add fats or sweeteners to foods.
- Eat or drink items that are mostly fats, contain added sweeteners and/or alcohol.

For example, if a participant has a calorie budget of 2,000 calories per day, of these calories at least 1,735 calories is needed for foods (without added fat and sugar) required to get essential nutrients. This leaves 265 discretionary calories for “extras.”

2.5 SELF-TEST QUESTIONS

1. The following are types of added sugars except:
 - a. High fructose corn syrup
 - b. Sucrose
 - c. Ascorbic acid
 - d. Lactose
2. Good sources of fiber include:
 - a. fruits, chicken and dairy
 - b. fruits, vegetables and whole grains
 - c. vegetables, dry beans and cheese
 - d. whole grains, vegetable oils and nuts
3. The minimum calories required to meet your nutrient needs are called _____ calories.
4. Mary lost 20 pounds over the past several months. She really wants to keep the weight off and plans on doing daily physical activity. MyPyramid recommends how much daily physical activity to BEST maintain weight loss?
 - a. 30 minutes brisk walking
 - b. 45 minutes brisk walking
 - c. 70 minutes brisk walking
5. **True or False.**
It's OK to eat foods with added sugar if you meet MyPyramid food group recommendations and don't exceed your calorie level.
6. You are shopping for whole grains in the grocery store. Which of the following grains would you buy if you were looking for whole grains?

a. Popcorn	f. Crackers
b. Bulgar	g. Whole wheat bread
c. Oatmeal	h. Pretzels
d. Brown rice	i. Multi-grain bread
e. Corn tortillas	j. Noodles
7. What factors are considered in determining someone's calorie needs using MyPyramid?

8. Name 3 foods from the meat and beans group that are low in saturated fats.
9. MyPyramid emphasizes 3 subgroups of vegetables that Americans need to eat more often for good health. What are these 3 subgroups?
10. Joe is trying to get the most nutrients for his calories. Take a look at what he ate yesterday and help him think about how he could reduce his solid fats, added sugars and other “extra” calories. List at least 4 suggestions for how he could improve his nutrient intake.

Breakfast

Sweet Roll

Sunny D

Lunch

BLT (3slices bacon) on buttered white bread

Sandwich cookies

Peaches canned in syrup

2% milk

Dinner

Soda

8 ounce steak

Baked potato with sour cream

Tossed salad with ranch dressing